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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/408,323	09/29/1999	JERRY R. EBNER	MTC6610(39-2	3903

321 7590 06/09/2005

SENNIGER POWERS LEAVITT AND ROEDEL  
ONE METROPOLITAN SQUARE  
16TH FLOOR  
ST LOUIS, MO 63102

EXAMINER

MAIER, LEIGH C

ART UNIT	PAPER NUMBER
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1623

DATE MAILED: 06/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/408,323

Applicant(s)

EBNER ET AL.

Examiner

Leigh C. Maier

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 3/30/05.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-52, 79-229, 236-244 and 247-354 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13-52, 79-99, 206-229, 236-241, 256-300 and 311-354 is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-12, 100-105, 200-205, 242-244, 247-255 and 301-304 is/are rejected.
- 7) ☒ Claim(s) 5, 106-199 and 305-310 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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## **DETAILED ACTION**

### ***Status of the Prosecution***

Claims 23, 91, 145, 274, and 292 are currently amended. Claims 53-78, 230-235, 245, and 246 have been canceled. Claims 301-354 are newly added. Claims 1-52, 79-229, 236-244 and 247-354 are pending.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action. Any objection or rejection not expressly repeated has been withdrawn.

Applicant is entitled to amend claims to depend from other claims as he sees fit. However, it is noted that claim 329 does not appear to be amended according to the pattern that Applicant uses in the other new claims. That is, the examiner would have expected that claim 329 would depend from claim 33 rather than claim 37. Note that this claim is not being objected to or rejected for any reason; it just seemed to be an aberration. Applicant may want to make sure that the dependencies are as intended.

### ***Allowable Subject Matter***

Claims 13-52, 79-99, 206-229, 236-241, 256-300, and 311-354 are allowed. Claims 5, 106-199, and 305-310 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Reasons for determination of allowable subject matter is as set forth in the previous Office action.

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***Claim Rejections - 35 USC § 103***

Claims 1-4, 6-12, 100-105, 200-205, 242-244, and 247-255 are again rejected under 35 U.S.C. 103(a) as being unpatentable over NITROKEMIA (EP 019445) in view of HERSHMAN et al (US 4,264,776), VAN DAM et al (J. Catalysis, 1991), and CHOU (US 4,624,937), as set forth in the previous Office action. Newly added claims 301-304 are included in this rejection.

The invention is as set forth in the previous Office action.

Applicant's arguments filed March 30, 2005 have been fully considered but they are not persuasive.

In the previous Office action, the examiner indicated the level of CO yield recited in claim 5 appeared to correlate with decreased noble metal leaching. In response, Applicant cites the data in Table 6 of the instant specification. This is, in fact, the data considered in making the determination that claim 5 (in independent form) would be allowable. Applicant notes that the first and second catalyst samples have CO desorption yields of below the 1.2 mmol CO/g limitation. That is correct, but their yields are also below 1.84, or 100, for that matter. It in no way demonstrates that the 1.2 maximum is a critical level. One cannot determine the level of Pt leaching at 1.19 or 1.0 or 0.5.

Applicant also notes that these two catalysts demonstrate strong catalyst activity in oxidizing formaldehyde. Again, true, but the fact that a catalyst, which has been treated in a way that would be expected to increase its oxidizing power, is a better oxidation catalyst is not considered unexpected results.

Applicant further argues that CO desorption yield is correlated and predictive of noble metal retention and maintenance of catalyst activity. The examiner respectfully disagrees. One

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has only to examine the data for the third, fourth and fifth catalyst to see that this is not the case. It may be that for the “deeply reduced” catalysts having CO desorption levels of below 1.2, one reliably sees highly reduced noble metal leaching and a clear correlation between these factors, but these data alone do not support this.

Applicant contends that the measurement of CO desorption is an alternative method of assessing the surface of the catalyst. While that may be a valuable contribution to the art, the instant method is not one for catalyst assessment.

Applicant contends that neither NITROKEMIA nor CHOU nor VAN DAM teaches a continuous process. This is correct. However, the fact that each and every one of the many artisans who have conducted this well-studied process has not done so in a continuous fashion does not mean that the continuous process is not obvious.

Applicant argues that claim 100 does not merely require continuous oxidation of PMIDA but particularly requires oxidation of PMIDA (or salt) by continuously contacting an aqueous stream comprising said reactant with an oxygen source in a stirred tank reactor or continuous reactor system in the presence of a particulate catalyst comprising a particulate carbon support having a noble metal at the surface of said support. HERSHMAN does teach such a continuous oxidation but differing by reactor system. The examiner maintains that it would be within the scope of the artisan to select any suitable reactor system to conduct this well-studied process. Applicant has not demonstrated any criticality in the recited reactor system.

Further regarding HERSHMAN, Applicant argues that the reference would not “teach or suggest to one skilled in the art to abandon that teaching in favor of conducting the oxidation in a

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CSTR.” The examiner maintains that selecting an appropriate reactor system for a process that is known to be feasible for continuous operation would be within the scope of one of ordinary skill.

Finally, Applicant alleges that the artisan “would expect the fixed bed reactor of Hershman et al. to operate at least partially in plug flow, thereby providing a favorable kinetic driving force for the oxidation.” This argument regarding what one of ordinary skill would expect is presented without evidence.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

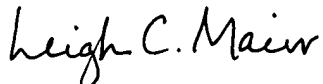
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*Examiner's hours, phone & fax numbers*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leigh Maier whose telephone number is (571) 272-0656. The examiner can normally be reached on Tuesday, Wednesday, or Friday 7:00 to 3:30 (ET).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. James O. Wilson (571) 272-0661, may be contacted. The fax number for Group 1600, Art Unit 1623 is (703) 872-9306.

Visit the U.S. PTO's site on the World Wide Web at <http://www.uspto.gov>. This site contains lots of valuable information including the latest PTO fees, downloadable forms, basic search capabilities and much more.



Leigh C. Maier  
Primary Examiner  
June 3, 2005